Paper No. 43

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

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Ex parte IVO G. DALLA LANA
and
KARL TZE-TANG CHUANG

_____

Appeal No. 1998-3189
Application No. 08/763,352

_____

ON BRIEF

_____

Before PAK, KRATZ, and TIMM, *Administrative Patent Judges*.

PAK, *Administrative Patent Judge*.

DECISION ON APPEAL

This is a decision on an appeal under 35 U.S.C. § 134 from the examiner's final rejection of claims 21 through 37, which are all of the claims pending in the above-identified application.

Claim 21 is representative of the subject matter on appeal and reads as follows:

> 21. A method of removing contaminating hydrogen sulfide from a flowing gas stream of natural gas or a flowing gas stream derived from petroleum or from natural gas and producing a product stream consisting essentially of the gas stream, elemental sulfur and water, comprising:
>
> (1) contacting the contaminated gas stream with a liquid sulfuric acid aqueous medium having a selectable sulfuric acid content of between 80% and 96% by weight;
>
> (2) reacting the hydrogen sulfide with the liquid sulfuric acid aqueous medium at a selectable temperature between 120°C and 150°C; and
>
> (3) controlling both the sulfuric acid content of the aqueous medium and the reaction temperature such that the hydrogen sulfide is reacted to essentially water and elemental sulfur.

The prior art references relied upon by the examiner are:

Maddox, Jr. et al. (Maddox)	3,849,540	Nov. 19, 1974
Torrence et al. (Torrence)	3,917,799	Nov. 4, 1975

Mellor, *A Comprehensive Treatise on Inorganic and Theoretical Chemistry*, Vol. X, p. 142 (London, Longmans, Green and Co., 1947).

Claims 34, 35 and 36 stand rejected under 35 U.S.C. § 112, first paragraph, as lacking descriptive support in the application disclosure as originally filed. Claims 21 through 37 stand rejected under 35 U.S.C. § 103 as unpatentable over

Torrence in view of Mellor and Maddox.

We reverse.

We turn first to the examiner's rejection of claims 34, 35 and 36 under 35 U.S.C. § 112, first paragraph, as lacking descriptive support in the application disclosure as originally filed. As stated in *In re Kaslow*, 707 F.2d 1366, 1375, 217 USPQ 1089, 1096 (Fed. Cir. 1983):

> The test for determining compliance with the written description requirement is whether the disclosure of the application as originally filed reasonably conveys to the artisan that the inventor had possession at that time of the later claimed subject matter, rather than the presence or absence of literal support in the specification for the claimed language . . . . The content of the drawings may also be considered in determining compliance with the written description requirement. [Citations omitted.]

According to the examiner (Answer, page 4):

> The negative limitations set forth in applicants' claims 34, 35 and 36 setting forth that the reaction is carried out in the absence of either a catalyst, activated carbon or oxygen are new matter.
>
> While the applicant comments [sic, applicants comment] that it is clear that the specification does not envision the use of a catalyst, activated carbon or oxygen and therefore claims 34-36 are in keeping with a disclosure and do not introduce new matter, the argument is not persuasive because the courts have [sic, the Board has] already determined that negative limitations recited in claims, which did not appear in the specification as

> filed, introduce new concepts and violate [the written] description requirement of 35 USC §] 112: please see In re [sic, Ex Parte] Grasselli 231 USPQ 393 [Bd. Pat. App. & Int. 1986)].

Grasselli does not provide a *per se* rule that any negative limitations, which are not expressly set forth in the application disclosure as originally filed, automatically violate the written description requirement of the first paragraph of 35 U.S.C. § 112. *Compare Ex parte Park*, 30 USPQ2d 1234, 1236 (Bd. Pat. App. & Int. 1994). *Grasselli*[1] is limited to a situation where the factual evidence of record supports a conclusion that negative limitations therein introduce new concepts into the application disclosure as originally filed.

In the present case, we determine that the examiner has not carried his burden of supplying a sufficient factual basis to support a conclusion that the negative limitations in question introduce ***new concepts*** into the application disclosure. *In re Oetiker*, 977 F.2d 1443, 1445, 24 USPQ2d 1443, 1444 (Fed. Cir. 1992) ("the examiner bears the initial

[1] 231 USPQ at 394.

burden, on review of the prior art or on any other ground, of presenting a *prima facie* case of unpatentability"). As correctly pointed out by appellants (Brief, pages 27 and 30-31 and Reply Brief, pages
1-5), the specification as a whole, including the examples provided therein, reasonably conveys to a person having ordinary skill in the art that inventors had possession of the subject matter (negative limitations) in question at the time the present application was filed. *Ex parte Park*, 30 USPQ2d at 1236. However, the examiner has not proffered or pointed to any factual evidence to the contrary. *Vas-Cath, Inc. v. Mahurkar*, 935 F.2d 1555, 1560-64, 19 USPQ2d 1111, 1114-17 (Fed. Cir. 1991)(the written description requirement is a ***factual question***). Accordingly, we reverse this rejection for the reasons set forth by appellants in their Brief and Reply Brief.

We turn next to the examiner's rejection of claims 21 through 37 under 35 U.S.C. § 103 as unpatentable over Torrence in view of Mellor and Maddox. The examiner has the burden of establishing a *prima facie* case of obviousness under

35 U.S.C.

§ 103. *In re Bell*, 991 F.2d 781, 783, 26 USPQ2d 1529, 1531 (Fed. Cir. 1993). This burden requires the examiner "to identify some suggestion to combine [the prior art] references" to arrive at the claimed subject matter. *In re Mayne*, 104 F.3d 1339, 1342, 41 USPQ2d 1451, 1454 (Fed. Cir. 1997). The applied prior art references as a whole must be viewed from the perspective of one of ordinary skill in the art to determine whether "some suggestion" is present to arrive at the claimed subject matter. *Cf. In re Mills*, 470 F.2d 649, 651, 176 USPQ 196, 198 (CCPA 1972).

In the present case, we determine that the examiner has not carried his burden of establishing a *prima facie* case of obviousness. As correctly pointed out by appellants at pages 9-25 of the Brief, the applied prior art taken as whole would not have led one of ordinary skill in the art to the catalyst regeneration step described in Torrence and/or the hydrogen sulfide decomposition technique described in Mellor to improve Maddox's process for removing hydrogen sulfide from natural gas. The examiner has not sufficiently explained why one of ordinary skill in the art would have selected sulfuric acid used in the catalyst regeneration step described in Torrence and/or the hydrogen sulfide decomposition technique described in Mellor over the highly effective purification medium already employed in Maddox. This is especially true in this situation since the examiner has presented no evidence regarding the effect of sulfuric acid on a natural gas stream or its impurities, e.g., water and carbon dioxide. From our perspective, to combine the prior art references as proposed by the examiner would be to destroy the invention on which Maddox is based. *Ex parte Hartmann*, 186 USPQ 366, 367 (Bd.

App. 1974). Accordingly, we reverse this rejection as well.

In view of the foregoing, the decision of the examiner is reversed.

REVERSED

CHUNG K. PAK Administrative Patent Judge	)	
PETER F. KRATZ Administrative Patent Judge	)	BOARD OF PATENT APPEALS AND INTERFERENCES
CATHERINE TIMM Administrative Patent Judge	)	

CKP:hh

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